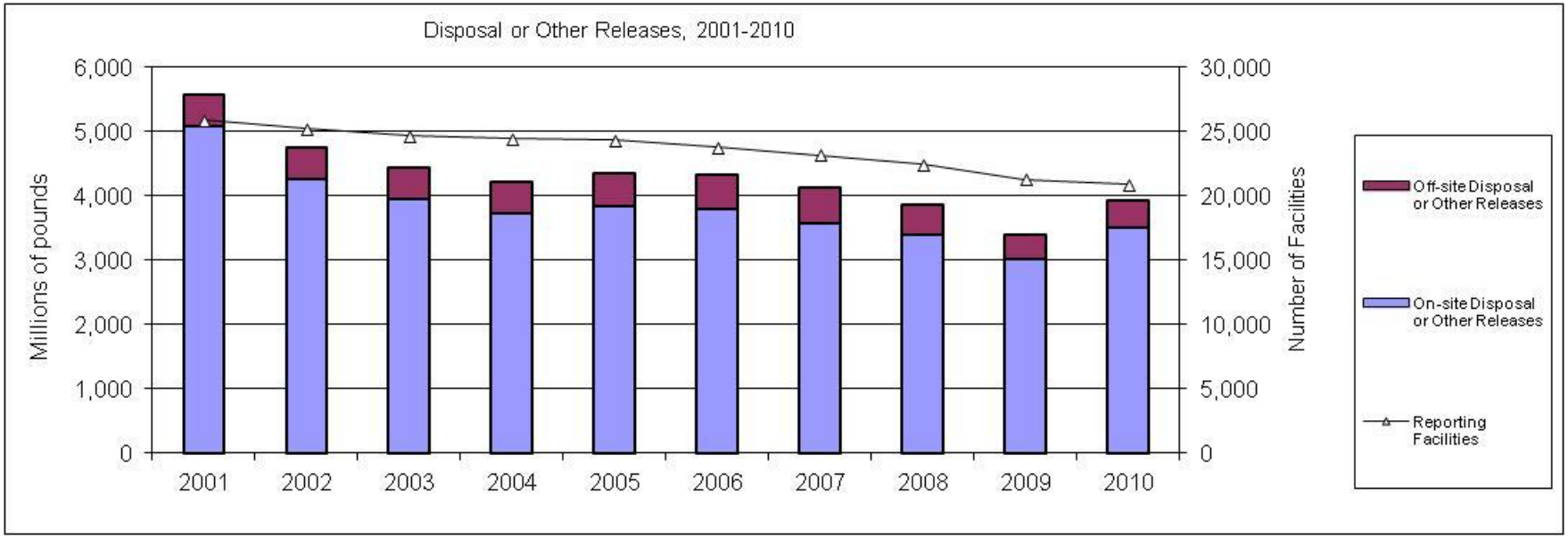
2010 TRI National Analysis

Briefing Slides

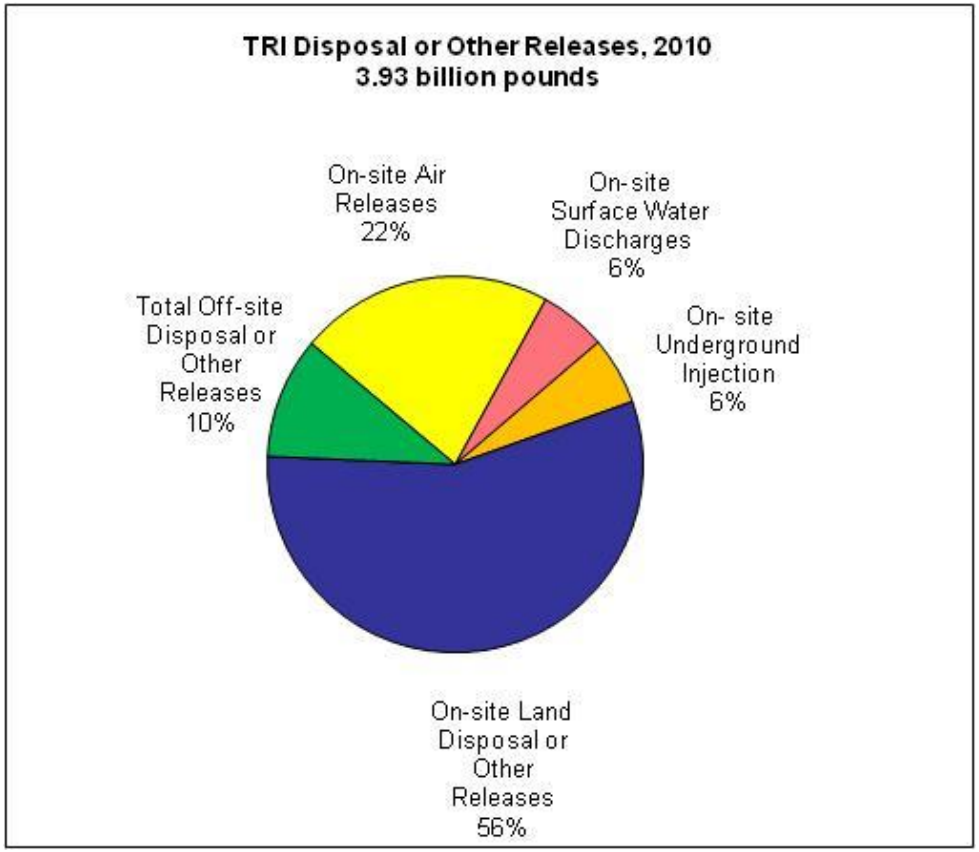
1/5/2012

Key Findings

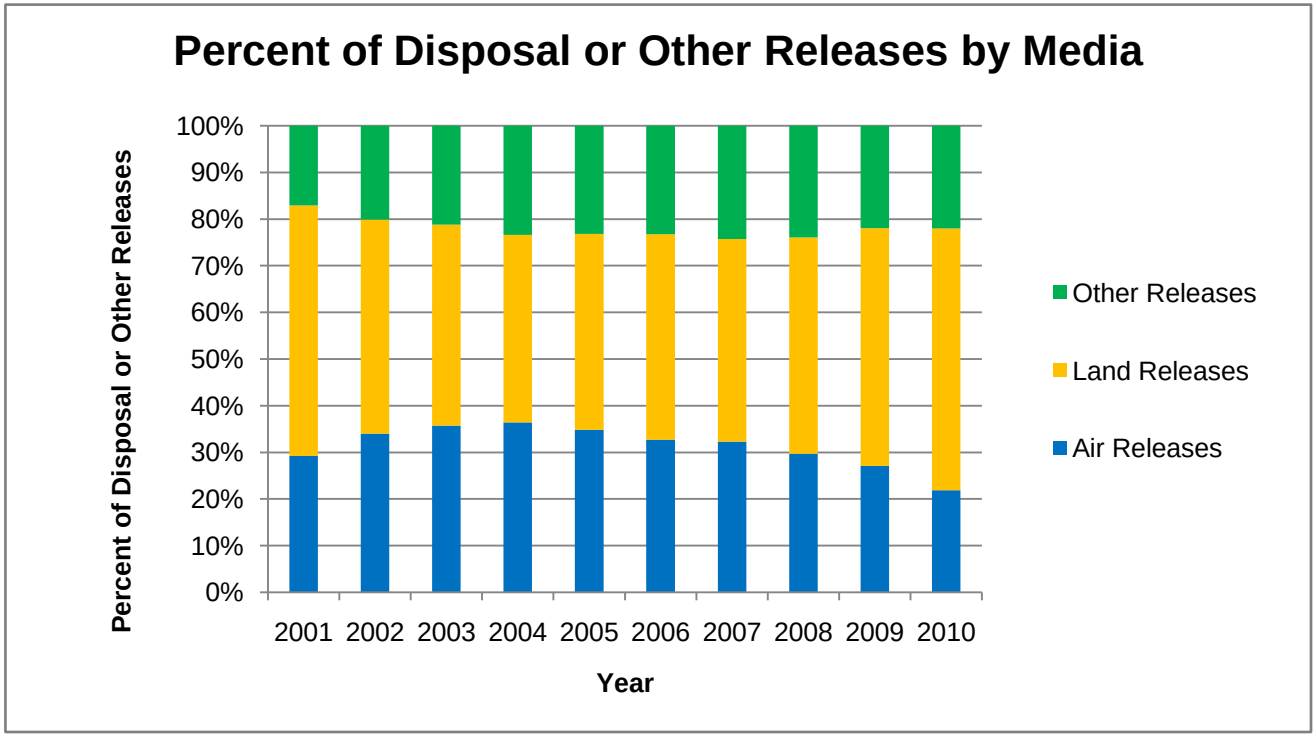
- From 2009-2010 disposal or other releases increased by 16%
  - Opposite downward trend since 2006 (decrease from 2008-2009 was 13%)
  - Many but not all industries show an increase
- Facilities reporting to TRI down by 2%



2010 TRI Releases by Environmental Media



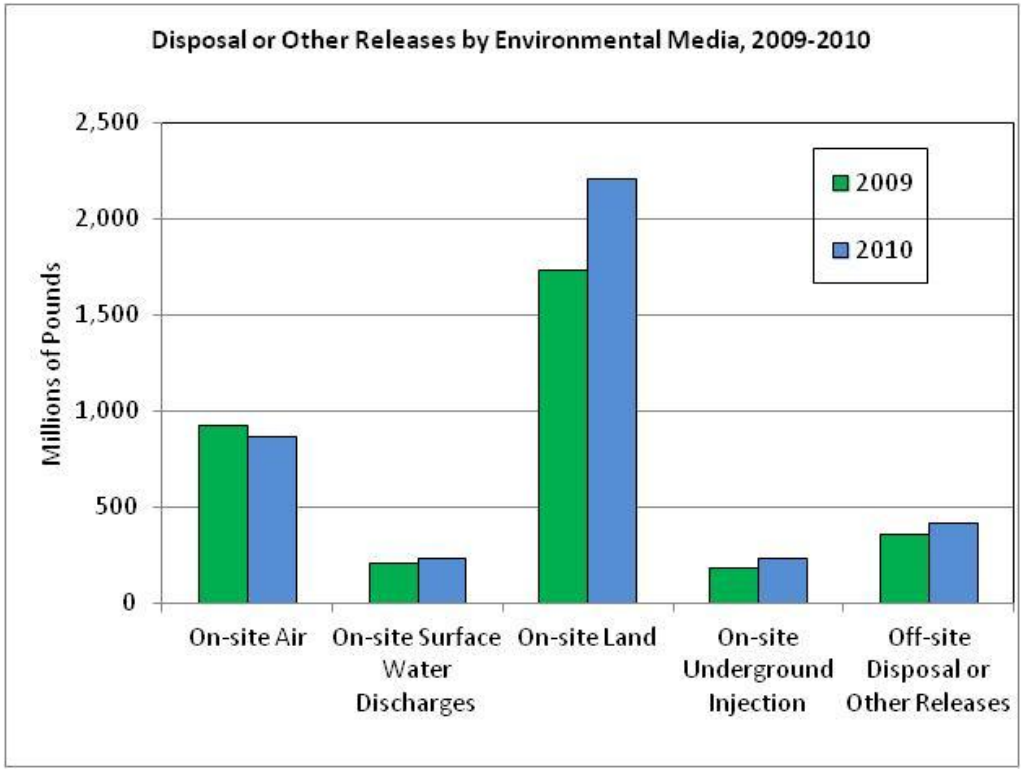
Long-Term Trends of Releases by Media



- Since 2004, the percentage of air releases has been decreasing while the percentage of land disposal has been increasing.

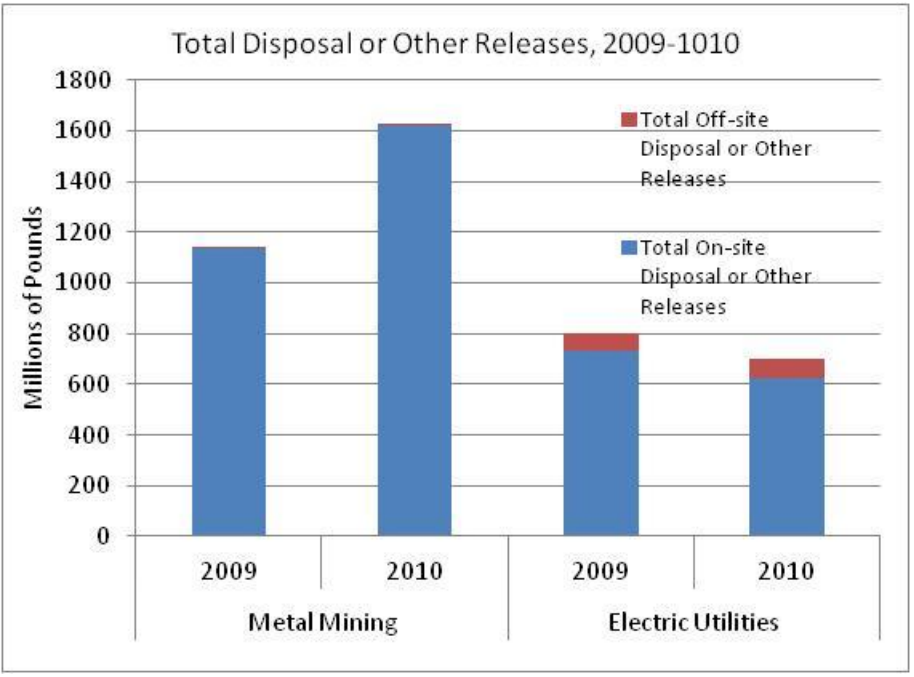
2009 and 2010 TRI Releases by Media

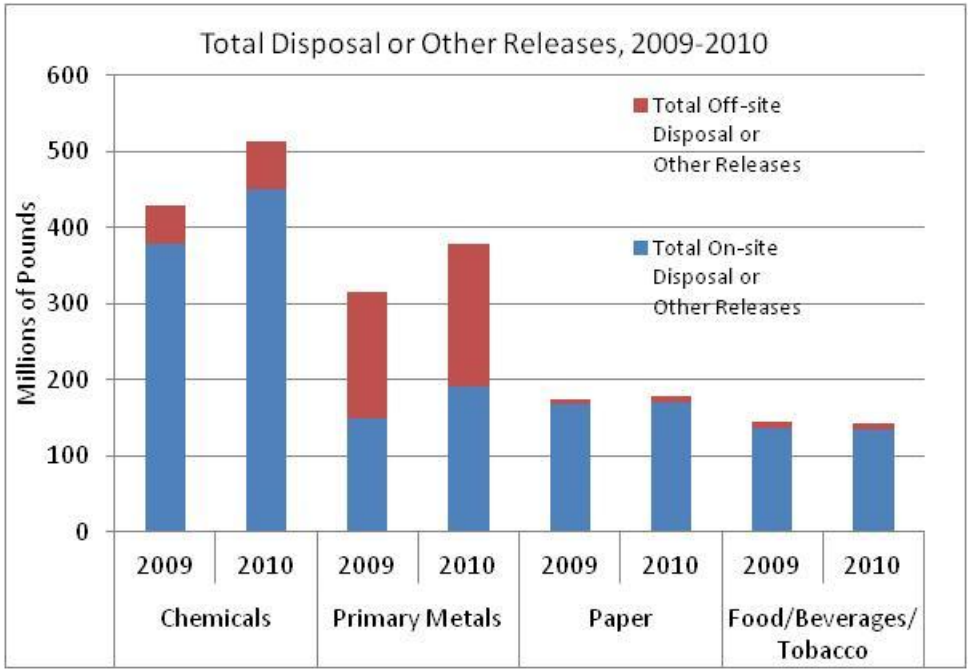
- Total on-site disposal or other releases up 16% (about 540 million lbs)
  - Air releases down 6% (about 58 million lbs)
  - Surface water discharge up 9% (about 19 million lbs)
  - Land up 28% (about 478 million lbs)
  - Underground injection up 27% (about 48 million lbs)
- Total off-site disposal or other releases up 15% (about 53 million lbs)



2009 – 2010 Data by Sectors

- Change in total disposal or other releases, 2009-2010, for sectors with largest total releases
  - Metal mines increased 487 million lbs (43%)
  - Chemical manufacturing increased 83 million lbs (19%)
  - Primary Metals increased 63 million lbs (20%)
  - Paper increased 2.6 million lbs (1%)
  - Electric utilities decreased 100 million lbs (12%)
  - Food/beverages decreased 622,000 lbs (less than 1%)





A Closer Look at Facilities with Large Increases and Decreases

- Largest increasers for releases overall
  - Four metal mining facilities (+510 million lbs)
  - Possible reasons:
    - Amount and composition of ore changes year to year
    - Improved sampling method
    - No longer eligible for the *de minimis* exemption for reporting certain chemicals
- Largest decreasers for releases in electric utilities sector
  - Four largest decreasing electric utilities (- 68 million lbs)
  - Possible reasons:
    - Improved estimation method
    - Improved pollution control
    - Changes in composition of coal

Releases of Persistent Bioaccumulative and Toxic chemicals (PBTs)

- PBTs are of particular concern
  - Because of persistence, bioaccumulative nature and high toxicity
  - Typically released at lower quantities
  - Have lower TRI reporting thresholds
- 2010 data for PBTs
  - Lead and lead compounds increased 51% from 2009-2010, mostly metal mining land disposal
  - Mercury and mercury compounds down 20%
    - Overall, 2010 mercury and mercury compound releases for the electric utilities sector went up by about 9% (11,706 lbs) over 2009 reporting. For this sector, however, 2010 air releases for mercury went down by about 6% compared to 2009, but were offset by larger increases in releases to land both on-site and off-site.
  - Polycyclic aromatic carbons (PACs) up 30%
  - Polychlorinated biphenyls (PCBs) up 23%
  - Dioxin and dioxin-like compounds (measured in grams) up 18%

Economic Analysis

- Comparing releases to production measures
  - Manufacturing sector
    - Releases decreased 29%, but production increased 4% since 2001
    - Releases have decreased despite growth in production
  - Metal mining sector
    - Releases decreased 29%, while production decreased only 16% since 2001
    - Analysis suggests factors other than production play a big role in reducing TRI releases
  - Electric utilities sector
    - Releases decreased 34%, while production decreased only 7% since 2001
    - Analysis suggests factors other than production play a big role in reducing TRI releases
    - Decreases in reported mercury emissions, specifically, may be due to changes in reporting, economic conditions, changes in the way utilities operate, and/or responses to federal and state actions such as state guidelines or rules, federal rules, or enforcement actions.
  - See appendices for more details

Contact Information

For questions about the National Analysis or TRI in general e-mail tri.help@epa.gov

or

contact Kara Koehrn,

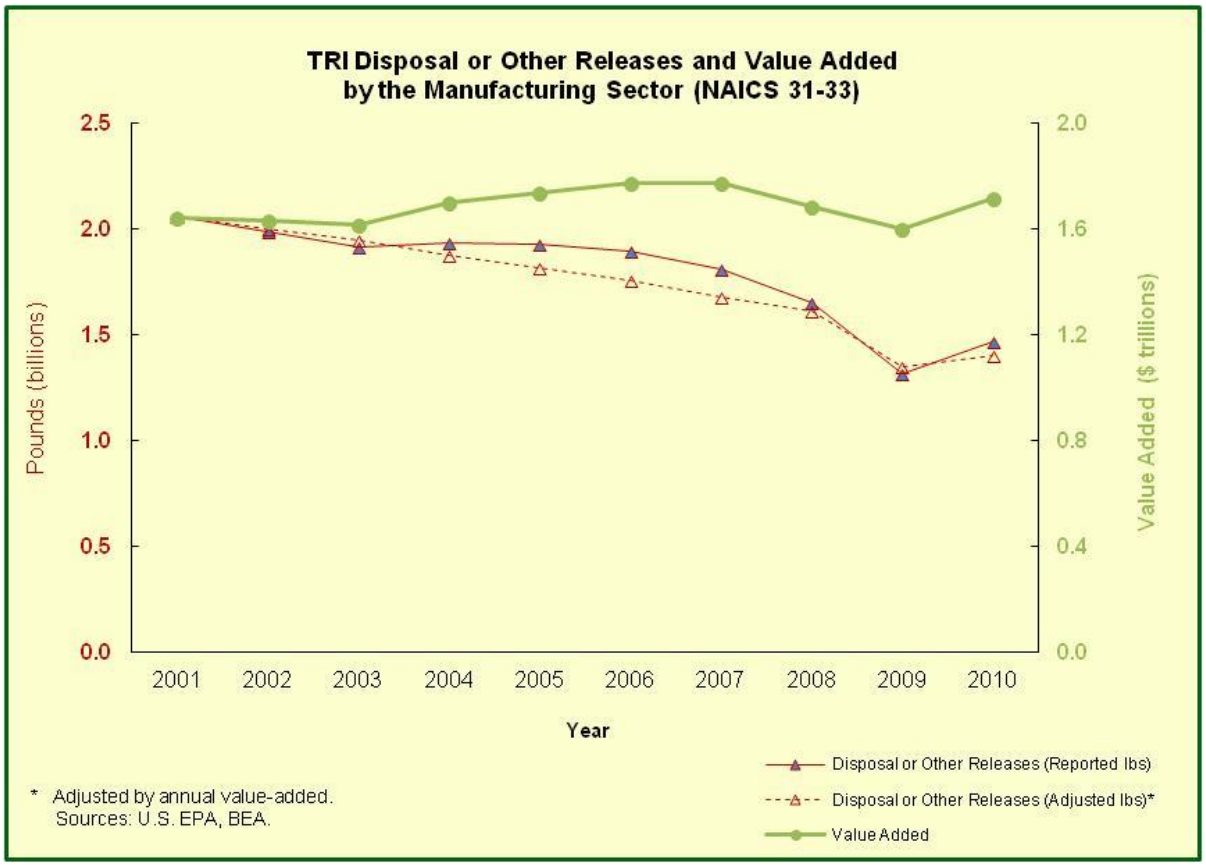
2009 TRI National Analysis staff lead

at Koehrn.Kara@epa.gov

202-566-0310

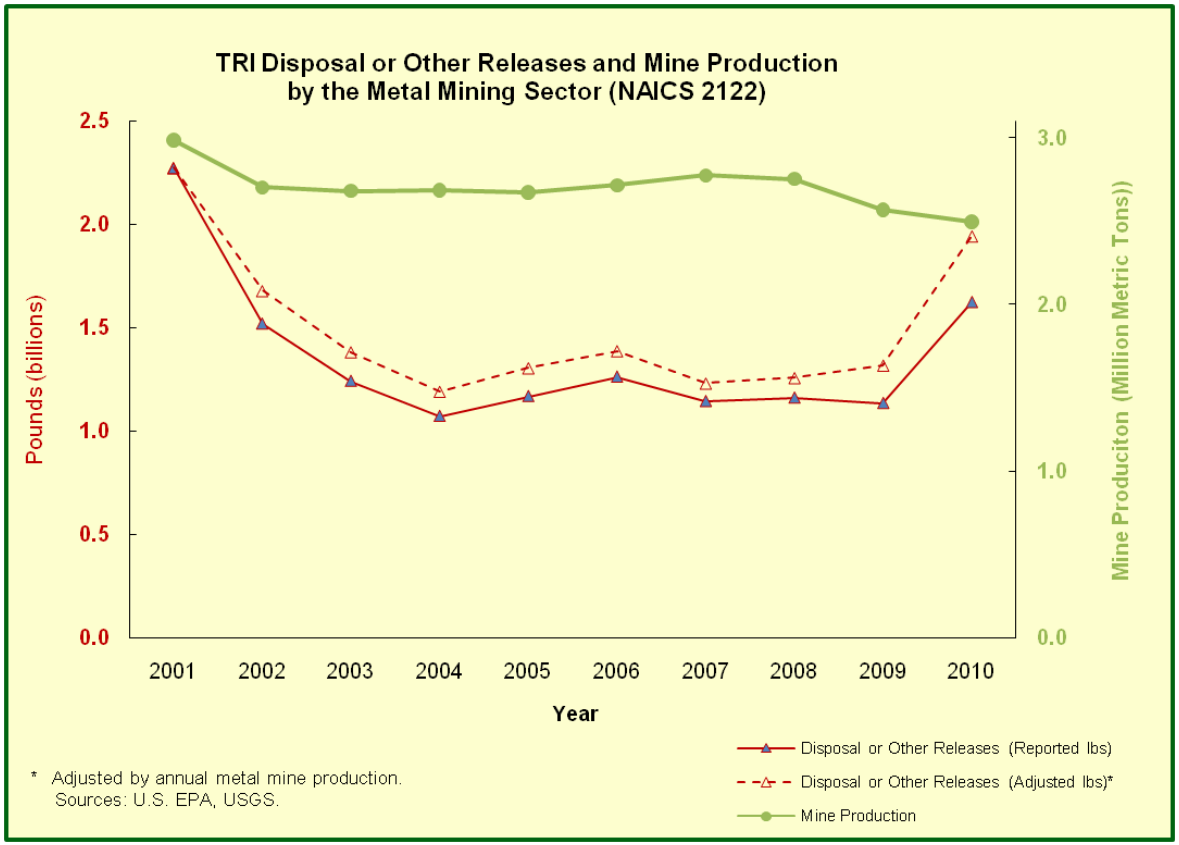
Appendix 1: Production for Manufacturing

- Economics analysis: Manufacturing
  - Disposal or other releases decreased 29% since 2001
  - Value added, an estimate of production, increased 4% since 2001
  - Releases have decreased despite growth in production
  - Dotted line is disposal or other releases normalized to value added
    - Small difference between normalized and observed releases suggests factors other than the economy play a big role in reducing TRI releases
  - Other factors: a reduction in chemical use; a shift to other management methods, such as recycling and treatment of chemicals; a gradual decrease in the number of facilities reporting to TRI; a change in the composition of raw materials



Appendix 2: Production for Metal Mining

- Economics analysis: Metal Mining
  - Disposal or other releases decreased 29% since 2001
  - Mine production, an estimate of production, decreased 16% since 2001
  - Dotted line is disposal or other releases normalized to mine production
    - Small difference between normalized and observed releases suggests factors other than the economy play a big role in reducing TRI releases



Appendix 3: Production for Electric Utilities

- Economics analysis: Electric Utilities
  - Disposal or other releases decreased 34% since 2001
  - Net generation, an estimate of production, decreased 7% since 2001
  - Dotted line is disposal or other releases normalized to net generation
    - Small difference between normalized and observed releases suggests factors other than the economy play a big role in reducing TRI releases until 2008.
    - Production may be playing a bigger role in 2009